



### Series I

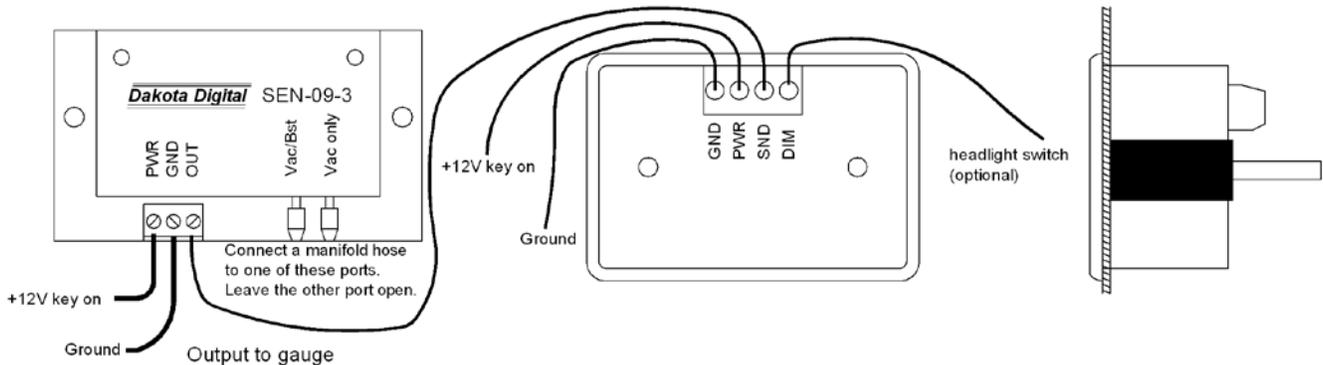
## ODY-09-1 VACUUM/BOOST GAUGE

## ODY-09-2 VACUUM GAUGE

## ODY-09-3 BOOST GAUGE

## SEN-09-3 SENSOR

- Wiring:** ODY-09
- GND - connect to a main ground location.
  - PWR - connect to 12 volt power. (An accessory circuit will work for this.)
  - DIM - connect to the tail light circuit.(+)
  - SND - connect to the SEN-09-3 OUT terminal.
- Wiring:** SEN-09-3
- PWR - connect to accessory power (+)
  - GND - connect to gauge ground
  - OUT - connect to the gauge SND terminal



### Mounting:

The gauge requires a rectangular hole 2-9/16" x 1-11/16". . It should be inserted into the opening from the front and the U-clamp will be installed from the back. Tighten the two nuts on the U-clamp so that the gauge is secure. Gauge depth to the back of the case is 1". Gauge depth including the mounting studs is 1-7/8".

### Factory settings:

Gauge setup: Vac/Bst, fast update  
Warning point: warning disabled

- The vacuum/boost gauge will operate and read correctly between the range of 30 psi – 30 inHg..
- The gauge has a user adjustable warning level and update rate.

A manifold vacuum line should be connected to one of the ports on the SEN-09-3. For a Vac/Bst gauge connect to the Vac/Bst port. For a Vacuum gauge connect to the Vac only port. Leave the unused port open to the air. The SEN-09-3 circuitry is not environmentally sealed so it should not be mounted in the engine compartment. Some possible mounting locations are under the dash or to the interior of the fire wall. A flexible rubber hose can be routed from the engine to the SEN-09-3. The sensor ports have 1/8" hose fittings. **The sender must be Dakota Digital part SEN-09-3.** Sending units from other manufacturers will cause incorrect readings. If a sender is not connected properly, the display will show "---".

**Setting the warning limits, gauge setup, and update speed:**

The SND terminal is used to enter and change the warning settings. You will need a wire connected to the SND terminal that can be momentarily powered while you watch the gauge. The headlights should be off or the DIM terminal unhooked so that it does not interfere with the setup.

1. To enter the set mode, turn the key on with the SND wire not touching anything. The gauge will display "SEt".
2. Power the SND wire. The gauge will display "typ". (If you wait too long the gauge will exit the setup routine and you will need to repeat step #1).
3. Release the SND wire. The gauge will display the current setup type. "bSt" is for Vac/Bst or Boost, "VAC" is for Vacuum only.
4. Each time you momentarily power the SND wire the setup will change.
5. When the desired setup value is displayed, keep the SND wire powered for about 2 seconds. The gauge will display "SPd".
6. Release the SND wire. The gauge will display the current update speed. ("SLO" for slow, "FSt" for fast, and "HLd" for peak hold)
7. Each time you momentarily power the SND wire the setting will change.
8. When the desired update speed is displayed, keep the SND wire powered for about 2 seconds. The gauge will display "HI".
9. Release the SND wire. The gauge will display the current high warning value.
10. Each time you momentarily power the SND wire the number will change.
11. When the desired high warning value is displayed, keep the SND wire powered for about 2 seconds. The gauge will display "--".
12. Turn the key off.

**Troubleshooting guide.**

<u>Problem</u>	<u>Possible cause</u>	<u>Solution</u>
Gauge will not light up	PWR terminal does not have power. GND terminal does not have a good ground.	Connect to a location that has power. Connect to a different ground location.
	Gauge is damaged.	Return gauge for service. (see instructions)
Gauge lights up, but does not read correctly.	Loose connection on SND terminal. Poor ground connection. Gauge is sender setup is incorrect. Voltage or wiring problem in the vehicle wiring harness.	Reconnect wire. Move ground to different location See "Setting sender setup" in the manual. Check wiring harness for loose or damaged wires.
Gauge lights up, but displays "Er0".	Gauge is damaged.	Gauge must be returned for service. (see instructions)
Gauge lights up, but displays "---".	SND terminal is shorted to ground. Sender is damaged. Sender is not connected to gauge. Wire between gauge and sender is broken. Sender is damaged.	Check wire for damaged insulation. Replace if necessary. Replace sender. Connect SND terminal on gauge to sender terminal. Test and replace wire. Replace sender.
	Gauge is damaged.	Return gauge for service. (see instructions)
Gauge lights up, but displays "Er4".	Gauge is sender setup needs to be reset.	See "Setting sender setup" in the manual.
Gauge lights up, but displays "Er5".	Gauge warning points need to be reset.	See "Setting the warning limits" in the manual.
Gauge flashes constantly.	Warning limits are not set properly. Pressure is too low or too high.	Reset warning limits. Check engine.
Gauge will not dim.	DIM terminal is not connected correctly.	Check wiring connections.
Gauge remains dim at all times.	DIM terminal is getting power all of the time. Battery is very low. Gauge is damaged.	Connect DIM wire to location that only has power when the headlights are on. Recharge or replace vehicle battery. Return gauge for service. (see instructions)

**Technical specifications**

Minimum operating voltage	-	7 VDC		
Maximum operating voltage	-	17 VDC		
(operating at or near maximum voltage for an extended time can damage unit)				
		Vac/Bst	Vacuum	Boost
Maximum pressure reading	-	30 psi	0 psi	30 psi
Maximum vacuum reading	-	30 inHg	60 inHg	30 inHg.
Gauge Resolution	-	.2psi/1inHg	.4 inHg	.2psi/1inHg
Warning Range	-	6.8 – 30	14 – 60	6.8 – 30
Typical gauge accuracy	-	±1%		
Typical current draw (@ 13.8V)	-	0.1 A		

**SERVICE AND REPAIR**

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

**Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.** Package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. Be sure to include the RMA number on the package, and include a complete description of the problem with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day. Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase. Send no money. We will bill you after repair.

**Dakota Digital 24 Month Warranty**

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship within 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover removal or reinstallation of the product. This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of any warranty hereunder, including any implied warranty of merchantability, must be brought within a period of 24 months from date of original purchase. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.



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